

BAND EFFICIENT QAM MODULATION USING QPSK AND MMIC

ABSTRACT OF THE DISCLOSURE

- 5 **[0046]** In a system for modulating an RF carrier, the RF carrier is fed through a lowpass filter and phase shifted approximately -90 degrees. The RF carrier is also fed through a high pass filter and phase shifted approximately +90 degrees. A switch connected to the output of the lowpass filter and connected to the output of the highpass filter, selects and outputs either the -90 degree
- 10 phase shifted carrier output from the lowpass filter or the +90 degree phase shifted carrier output from the highpass filter depending on a switching state determined by data bit information received at a data port to produce a BPSK modulated RF carrier. Two such BPSK modulators may be combined using lowpass and highpass filters to form a QPSK modulator. Two such QPSK
- 15 modulators may be combined with an attenuator to form a QAM modulator.